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US 5680937 A US 5370242 A US 5195642 A

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(54) Abstract Title
Disc rack formed as a table leg

(57) A rotary disc storage rack 5 forms part of a leg of a table 100. The rack has a main body, with horizontally parallel slots 51 for storing discs, secured to one or more locating members 52 each having a retaining ring portion 53. Each ring engages an annular groove 61 in a tubular support leg 6 mounted to the table top 4 and base frame 7, to secure the main body to the leg while allowing free rotation about it.

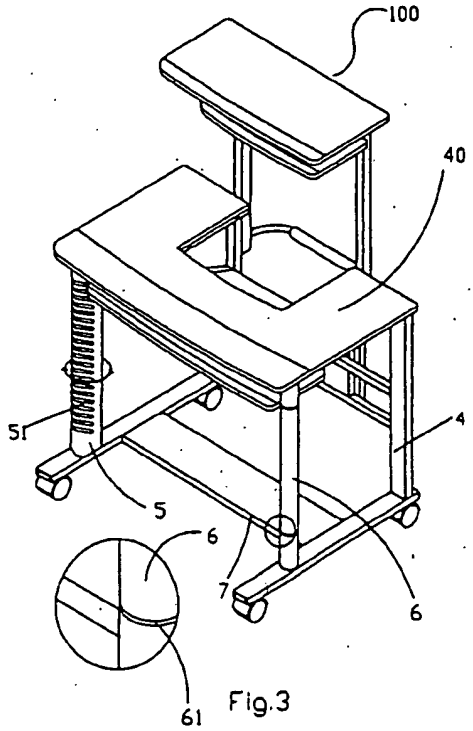

Fig.3

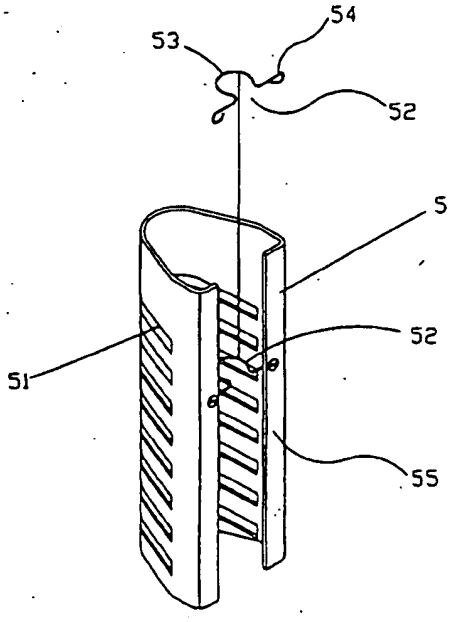

Fig.5

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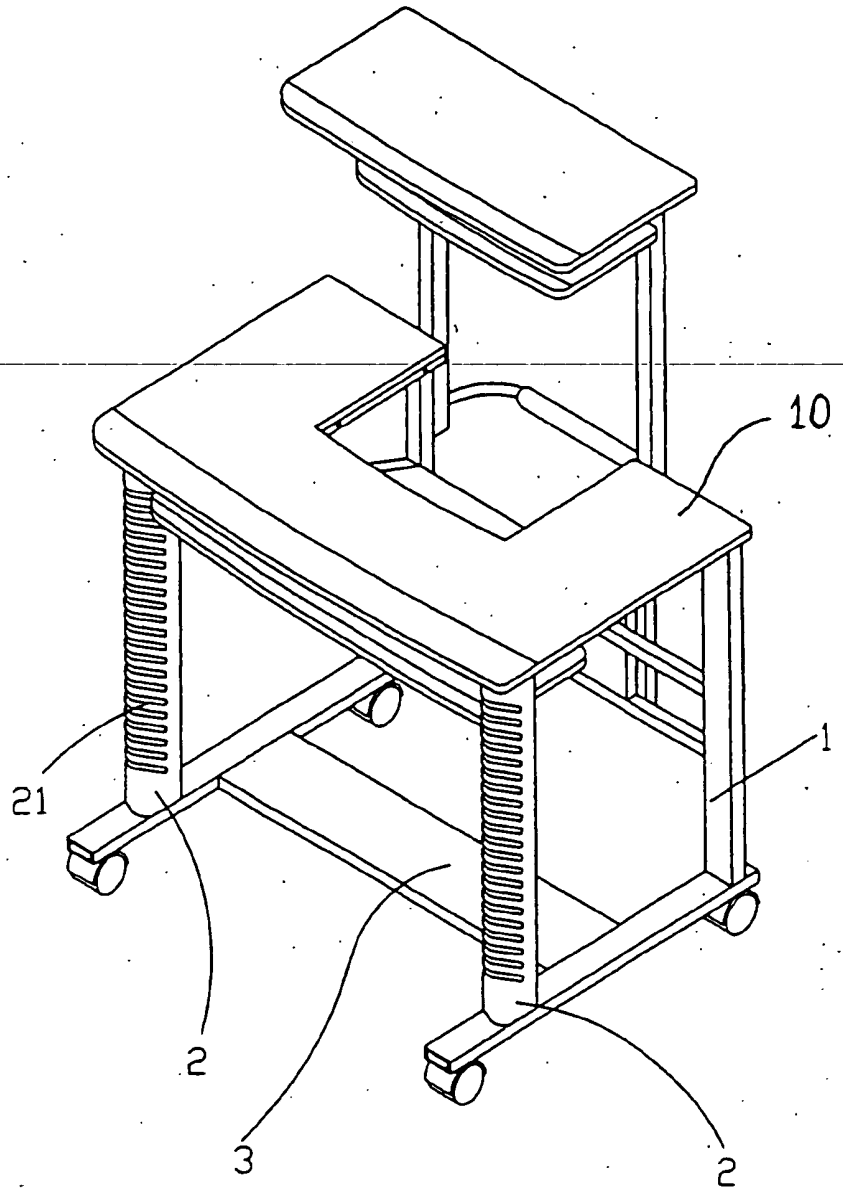

Fig.1

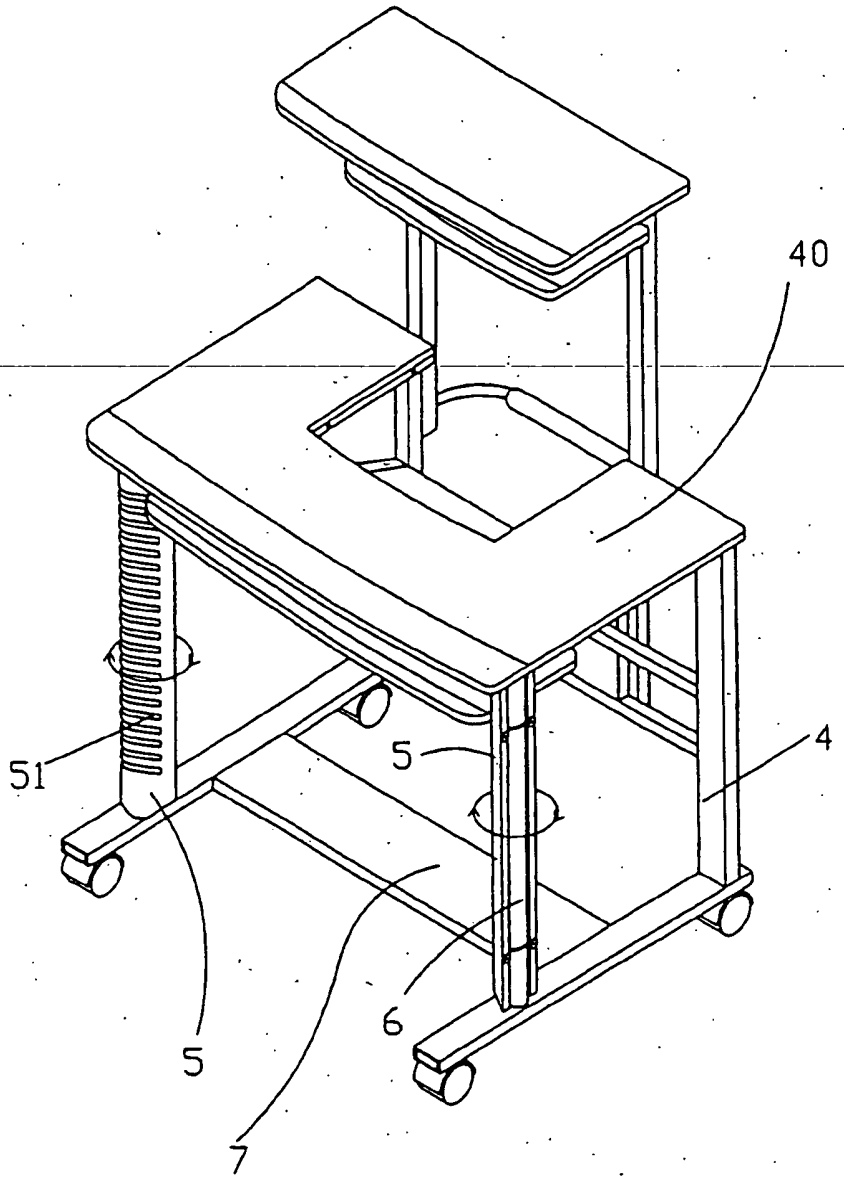

Fig.2

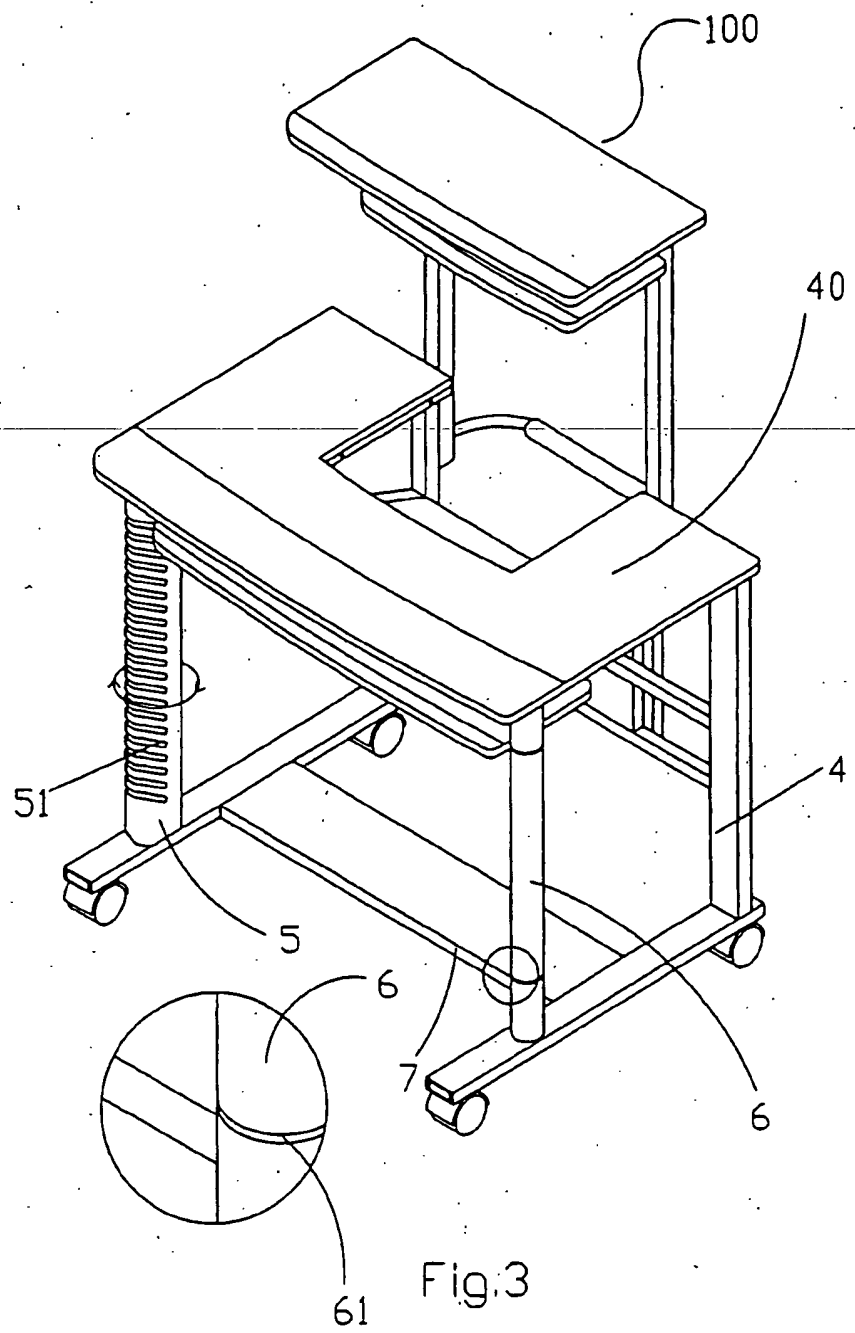

Fig.3

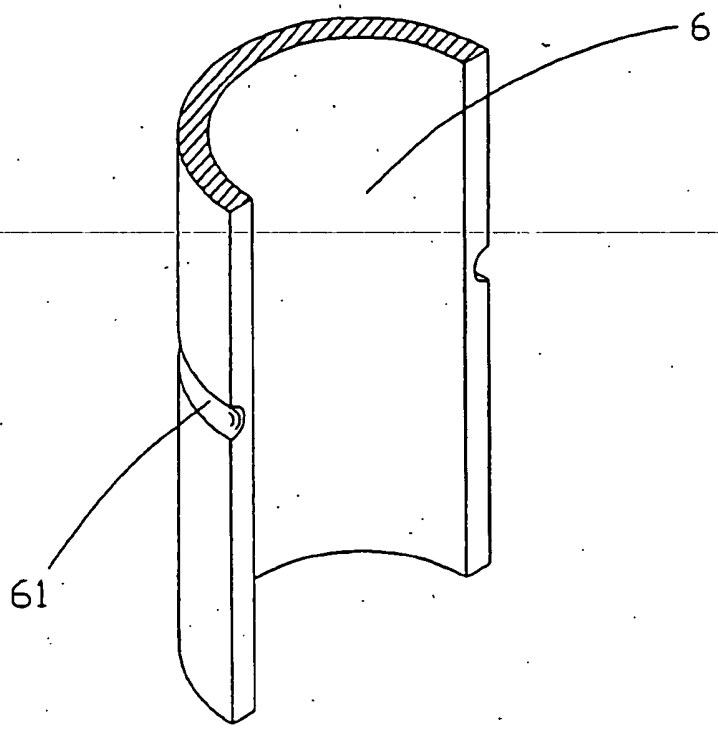

Fig.4

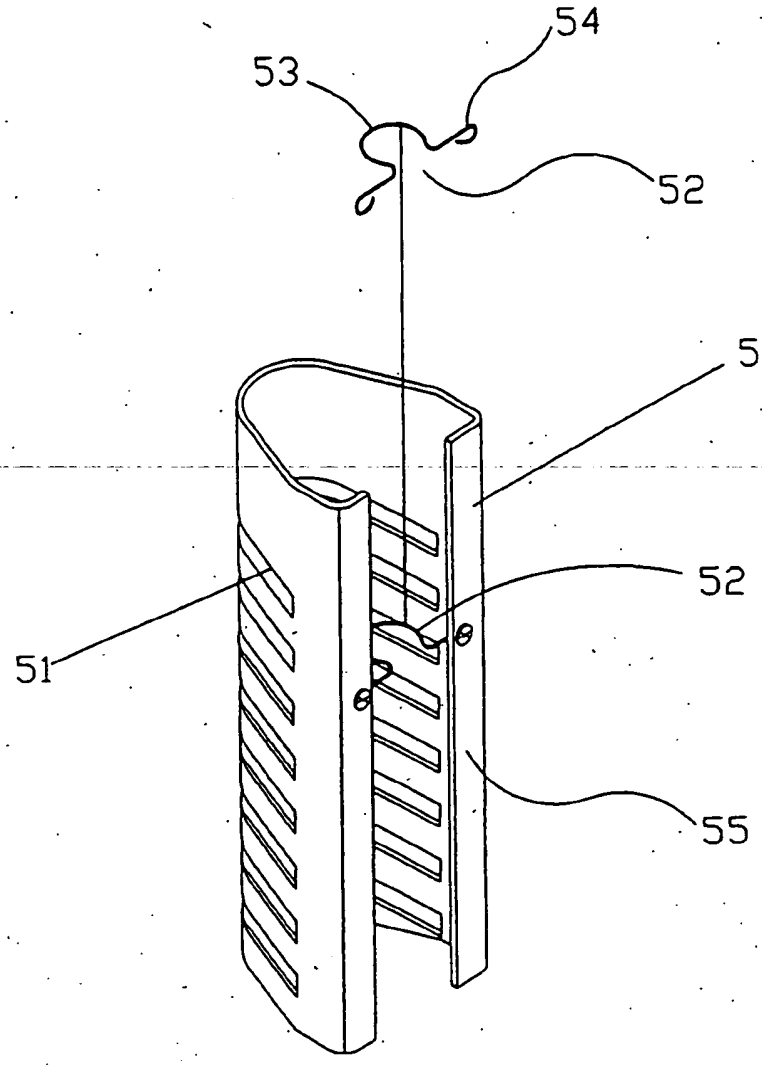

Fig.5

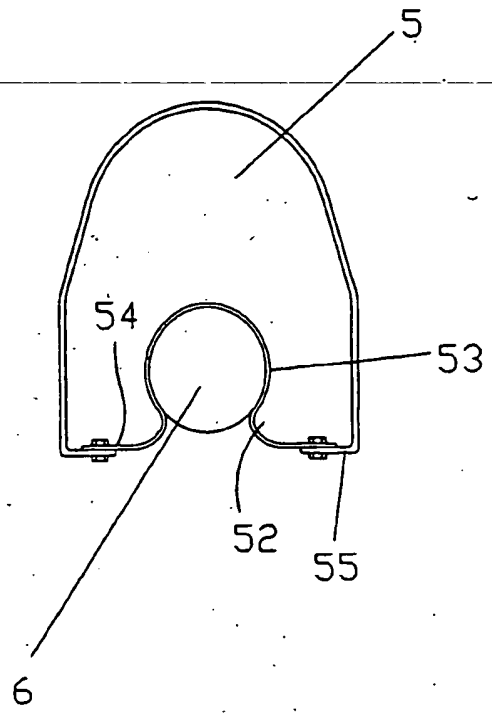

Fig.6

A ROTATABLE DISC STORAGE RACK MOUNTED TO A TABLE

The present invention relates to a disc storage rack mounted to a table, and more particularly to a disc storage rack rotatably mounted to a table and serving as a leg thereof.

The table referred to herein is generally a computer table or an office desk. Two legs of the table close to an inner side of the table may be formed of a plurality of horizontally parallel disc insertion slots to simultaneously serve as two vertical disc storage racks for storing most commercially available computer discs, compact discs, music compact discs, video compact discs, etc. These disc storage racks provided on the legs create additional disc storage space on the table or desk, making the table or desk more practical for use and more competitive in the markets.

Fig. 1 shows a conventional table 10 of which two of four legs 1, preferably two legs close to an inner side of the table 10, are formed into two disc storage racks 2. The disc storage rack 2 each is provided at a front surface, that is, a surface facing a user sitting before the table 10, with a plurality of horizontally parallel insertion slots 21 for most commercially available computer discs, compact discs, music compact discs, video compact discs, etc. to insert thereinto. The table 10 has an I-shaped lower frame 3 with casters connected thereto. The legs 1

and the disc storage racks 2 are fixedly connected at their upper and lower ends to a tabletop and the I-shaped lower frame 3, respectively, of the table 10.

Although the disc storage racks 2 provided on the two front legs of the table 10 make the table 10 more practical for use, they are stationary and can not be rotated. A user always has to move to the front of the disc storage racks 2 to insert or remove discs into or from the racks 2. This is, of course, very inconvenient to the user.

It is therefore desirable to develop a rotatable disc storage rack for mounting to a table to eliminate the drawbacks existing in the conventional disc storage rack 2 fixedly mounted to the table 10.

A primary object of the present invention is to provide a rotatable disc storage rack for mounting to a table and the like, so that a user may conveniently insert or remove discs into or from the disc storage rack from any position simply by turning the rotatable disc storage rack about the table leg.

To achieve the above and other objects, the rotatable disc storage rack of the present invention mainly includes a main body, at least a locating member, and a tubular member. The main body is a bent flat member having a front surface and two back surfaces and defining an inner space between the

front and the back surfaces. The front surface of the main body is provided with a plurality of horizontally parallel slots for each removably receiving a disc therein. The at least one locating member includes a central retaining ring portion and two end portions and is disposed in the inner space of the main body with the two end portions fixedly connected to the two back surfaces of the main body. The tubular member is provided around its circumferential surface with at least one annular groove and is fixedly connected at upper and lower ends to a tabletop and a lower frame of the table, respectively, to serve as one leg of the table. The main body of the disc storage rack is mounted around the tubular member by engaging the central retaining ring portion of the at least one locating member with the at least one annular groove around the tubular member and can therefore be easily turned about the tubular member to facilitate convenient insertion or removal of discs into or from the slots from any position.

The objects, features, and functions of the present invention can be best understood by referring to the following detailed description of the preferred embodiments and the accompanying drawings, wherein

Fig. 1 is a perspective of a table with conventional disc storage racks formed on two fixed legs of the table;

Fig. 2 is a perspective of a table with disc storage racks

according to the present invention rotatably mounted to the table and serving as two legs thereof;

Fig. 3 shows the table of Fig. 2 with the main body of one disc storage rack dismounted from the tubular member to show means provided on the tubular member for movably engaging the tubular member with the locating member of the disc storage rack;

Fig. 4 is a fragmentary and enlarged perspective view of the tubular member of the disc storage rack of the present invention;

Fig. 5 is a perspective of the main body and the locating member of the disc storage rack according to the present invention; and

Fig. 6 is a top plan view showing the manner in which the main body and the locating member of the disc storage rack of the present invention are assembled to the tubular member of Fig. 4.

Please refer to Fig. 2. The present invention relates to a disc storage rack 5 that is rotatably mounted to a table 100. As shown in Fig. 5, the disc storage rack 5 includes a main body formed by bending a flat member into a shape suitable for fixing around a tubular member 6 while defining an inner space. A plurality of horizontally extended slots

51 are parallelly formed on a front surface of the main body of the disc storage rack 5. Two ends of the flat member forming the main body 5 are bent to face each other and form two back surfaces 55 of the main body 5. There is at least one locating member 52 disposed in the inner space defined by the main body 5 with two end portions 54 of the locating member separately extended through and fixed to the back surfaces 55 of the main body 5. The locating member 52 is preferably a steel wire that is bent so that a C-shaped retaining ring portion 53 is formed between the two laterally extended end portions 54 of the locating member 52.

Please refer to Figs. 2, 3, and 4 at the same time. The table 100 includes two ordinary legs 4 close to an outer side thereof. Two tubular members 6 are vertically mounted close to an inner side of the table 100 and therefore serve as two front legs of the table 100. The tubular members 6 are fixedly connected at upper ends to a bottom side of a tabletop 40 of the table 100 and at lower ends to an I-shaped lower frame 7 of the table 100. At least one annular retaining groove 61 is formed around outer circumferential surface of each tubular member 6. By pushing the main body 5 toward the tubular member 6 to allow the retaining ring portion 53 of the at least locating member 52 to engage with the at least retaining groove 61 around the tubular member 6, the main body 5 and the locating member 52 are connected to and around the tubular member 6, as shown in Fig. 6.

With the retaining ring portion 53 of the at least one locating member 52 fitly received in and smoothly contacting with the at least one annular retaining groove 61 of the tubular member 6, the main body of the disc storage rack 5 can be easily turned about the tubular member 6.

Since the disc storage rack 5 may be easily turned about the tubular member 6 which serves as a leg of the table 100, discs (not shown) may be conveniently inserted into or removed from the slots 51 on the main body of the disc storage rack 5 from any position simply by turning the main body 5 about the tubular member 6. The rotatable disc storage rack 5 of the present invention is therefore more convenient and practical for use than the conventional fixed disc storage rack.

What is to be noted is the form of the present invention shown and disclosed is to be taken as a preferred embodiment of the invention and that various changes in the shape, size, and arrangements of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claims.

CLAIMS:

1. A rotatable disc storage rack for mounting to a table and the like, said table including a tabletop, an I-shaped lower frame with casters, and at least two legs fixedly connected at their upper and lower ends to said tabletop and said I-shaped lower frame, respectively, said rotatable disc storage rack comprising a main body, at least one locating member, and a tubular member;

said main body being formed from a flat member that is bent into a shape suitable for fixing around said tubular member while defining an inner space, a plurality of substantially horizontally extended slots being parallelly formed on a front surface of said main body, two ends of said main body being bent to face each other and forming two back surfaces of said main body;

said at least one locating member being bent to form a central retaining ring portion between two laterally extended end portions, and being fixedly disposed in said inner space defined by said main body; and

said tubular member being fixedly connectable at an upper end to a bottom side of said tabletop of said table and at a lower end to said I-shaped lower frame so as to serve as a leg of said table, and being provided around its outer circumferential surface with at least one annular retaining groove sized to engage with said retaining ring portion of said at least one locating member, whereby said main body of said disc storage rack can be easily turned about said tubular member to permit easy insertion or removal of discs into or from said slots on said main body from any position.

2. A rotatable disc storage rack as claimed in claim 1, wherein said at least locating member is preferably made of a steel wire, said retaining ring portion being in a shape of figure "C", and said two end portions separately extending through and being fixed to said two back surfaces of said main body.

3. A rotatable disc storage rack as claimed in claims 1 and 2, wherein said tubular member each serves preferably as one of two legs of said table close to an inner side of said table, that is a side of said table close to a user sitting before said table.

4. A rotatable disc storage rack substantially as claimed with reference to Figures 2 to 6 of the present application.

5. A table having at least two legs, at least one of said legs comprising a rotatable disc storage rack as claimed in any one of the claims 1 to 4.

6. A table substantially as herein described with reference to Figures 2 to 6 of the accompanying drawings.

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Claims searched: ALL Date of search: 19 August 1999

Patents Act 1977
Search Report under Section 17

Databases searched:

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.Q): A4L (LAAB LABB)

Int Cl (Ed.6): A47B (13/00 21/00 81/06)

Other: Online : EPODOC,WPI,JAPIO

Documents considered to be relevant:

Category	Identity of document and relevant passage	Relevant to claims
A	US5680937 A SMITH : See the Figures	1
A	US5370242 A HUANG : See the Figures	1
A	US5195642 A DARDASHTI : See the Figures	1

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.